

We claim:

1. A method of operating a communication network to transfer data between nodes of the communication network, the communication network comprising a first node that includes first code, the method comprising the steps of:

executing the first code in the first node to establish a communication channel with a second node, replicate the first code to generate second code, and provide the second code to the second node over the communication channel;

executing the second code in the second node to establish the communication channel with a third node, replicate the second code to generate third code, and provide the third code to the third node over the communication channel;

receiving data in the second node from the first node over the communication channel and executing the second code in the second node to handle the data; and

receiving the data in the third node from the second node over the communication channel and executing the third code in the third node to handle the data.

2. The method of claim 1 further comprising the steps of:

executing the second code in the second node to establish the communication channel with a fourth node, replicate the second code to generate fourth code, and provide the fourth code to the fourth node over the communication channel; and

receiving the data in the fourth node from the second node over the communication channel and executing the fourth code in the fourth node to handle the data.

3. The method of claim 1 wherein the step of executing the second code in the second node to handle the data further comprises the step of:

executing the second code in the second node to replicate the data received from the first node, and route the replicated data to a payload process in the second node.

4. The method of claim 3 further comprising the step of:

executing the payload process in the second node to receive the replicated data and process the replicated data locally on the second node.

5. The method of claim 4 further comprising the step of:  
executing the payload process in the second node to generate output data.

6. The method of claim 5 further comprising the step of:

5       executing the second code in the second node to multiplex the output data and status information from the second node and forward the output data and the status information over the communication channel to the first node.

7. The method of claim 6 further comprising the step of:

10       receiving control information in the second node from the first node over the communication channel and using the control information in the second node to handle the data.

8. The method of claim 1 further comprising the steps of:

15       routing the data and the control information from the second node to the third node over the communication channel.

9. The method of claim 1 wherein the first code comprises a streaming worm.

20   10. The method of claim 1 wherein the second node is remote from the first node and the third node is remote from the second node.

11. A communication network that provides for the transfer of data between nodes of the communication network, the communication network comprising:

- a first node;
- a second node; and
- 5 a third node;

the first node, responsive to executing first code, establishes a communication channel with the second node, replicates the first code to generate second code, and provides the second code to the second node over the communication channel;

10 the second node, responsive to executing the second code, establishes the communication channel with the third node, replicates the second code to generate third code, and provides the third code to the third node over the communication channel;

the second node receives data from the first node over the communication channel and executes the second code to handle the data; and

15 the third node receives the data from the second node over the communication channel and executes the third code to handle the data.

12. The communication network of claim 11 further comprising a fourth node, wherein:

20 the second node, responsive to executing the second code, establishes the communication channel with the fourth node, replicates the second code to generate fourth code, and provides the fourth code to the fourth node over the communication channel; and

the fourth node receives the data from the second node over the communication channel and executes the fourth code to handle the data.

25 13. The communication network of claim 11 wherein the second node receives the data from the first node over the communication channel, replicates the data, and routes the replicated data to a payload process in the second node.

30 14. The communication network of claim 13 wherein the second node, responsive to executing the payload process, receives the replicated data and processes the replicated data locally.

15. The communication network of claim 14 wherein the second node generates output data responsive to executing the payload process.

16. The communication network of claim 15 wherein the second node, responsive to executing the second code, multiplexes the output data and status information from the second node, and forwards the output data and status information over the communication channel to the first node.

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17. The communication network of claim 11 wherein the second node receives control information from the first node over the communication channel and uses the control information to handle the data.

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18. The communication network of claim 17 wherein the second node routes the data and the control information to the third node over the communication channel.

19. The communication network of claim 11 wherein the first code comprises a streaming worm.

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20. The communication network of claim 11 wherein the second node is remote from the first node and the third node is remote from the second node.